



## AMENDMENTS TO THE CLAIMS

### **Claims 1-36 (Canceled)**

**Claim 37 (New)** A semiconductor manufacturing system for producing a substrate to be treated including a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program according to the following events:

- a standby event for charging a substrate in a boat;
- a boat-up event for loading the boat in a reactor by raising an elevator;
- a ramping-up event for gradually raising a temperature;
- a process event for growing a film on a substrate;
- a ramping-down event for gradually decreasing a temperature;
- a boat-down event for drawing the boat from the reactor by lowering the elevator; and
- a standby event for discharging the substrate from the boat, wherein the controller includes

functions for:

- determining a timing at which the control program can be changed, wherein the process event for growing a film on a substrate is not determined as a time for changing the control program; and
- storing the control program in a memory, in accordance with a result of said determining, so as to be carried out with a processor.

**Claim 38 (New)** The semiconductor manufacturing system according to Claim 37, wherein the controller includes a function to temporarily hold the control program so as to store the control program held in the buffer in the memory.

**Claim 39 (New)** The semiconductor manufacturing system according to Claim 37, wherein the control program of the controller is changed while a temperature is in a constant state same as a state of which the reaction chamber is in a standby state.

**Claim 40 (New)** The semiconductor manufacturing system according to Claim 37, wherein the standby event for charging the substrate to the boat is determined as the timing for changing the control program.

**Claim 41 (New)** The semiconductor manufacturing system according to Claim 37, wherein the boat-up event for loading the boat in a reactor by raising an elevator is determined as the timing for changing the control program.

**Claim 42 (New)** The semiconductor manufacturing system according to Claim 37, wherein a boat-down event for drawing the boat from the reactor by lowering the elevator is determined as the timing for changing the control program.

**Claim 43 (New)** The semiconductor manufacturing system according to Claim 37, wherein a standby event for discharging the substrate from the boat is determined as the timing for changing the control program.

**Claim 44 (New)** A semiconductor manufacturing system for producing a substrate to be treated including a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program according to the following events:

a standby event for charging a substrate in a boat;  
a boat-up event for loading the boat in a reactor by raising an elevator;  
a ramping-up event for gradually raising a temperature;  
a process event for forming a film on a substrate;  
a ramping-down event for gradually decreasing a temperature;  
a boat-down event for drawing the boat from the reactor by lowering the elevator; and  
a standby event for discharging the substrate from the boat, wherein the controller includes functions for:

determining a timing at which the control program can be changed;

storing a new control program in a memory, in accordance with a result of said determining, so as to be carried out with a processor, wherein the process event for forming a film on the substrate is not determined as the timing for changing the control program; and

holding data used to carry out a prior control program so as to carry out the new control program stored in the memory with the processor by employing prior data.

**Claim 45 (New)** The semiconductor manufacturing system according to Claim 44, wherein the controller includes a function to temporarily hold the control program so as to store the control program held in the buffer in the memory.

**Claim 46 (New)** The semiconductor manufacturing system according to Claim 44, wherein the control program of the controller is changed while a temperature is in a constant state same as a state of which the reaction chamber is in a standby state.

**Claim 47 (New)** The semiconductor manufacturing system according to Claim 44, wherein the standby event for charging the substrate to the boat is determined as the timing for changing the control program.

**Claim 48 (New)** The semiconductor manufacturing system according to Claim 44, wherein the boat-up event for loading the boat in a reactor by raising an elevator is determined as the timing for changing the control program.

**Claim 49 (New)** The semiconductor manufacturing system according to Claim 44, wherein a boat-down event for drawing the boat from the reactor by lowering the elevator is determined as the timing for changing the control program.

**Claim 50 (New)** The semiconductor manufacturing system according to Claim 44, wherein a standby event for discharging the substrate from the boat is determined as the timing for changing the control program.

**Claim 51 (New)** A semiconductor manufacturing system for producing a substrate to be treated comprising a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program, the controller including functions for:

- holding data used for carrying out a prior control program;
- temporarily holding a new control program;
- receiving instruction as to an input of a change from a user; and

storing the new control program in a memory, so that it can be carried out by a processor, according to the instruction, wherein the control program is changed at a timing when the controller to which the control program is supplied does not carry out a control process.

**Claim 52 (New)** A semiconductor manufacturing system according to Claim 51, wherein the control program is changed at a timing when the semiconductor manufacturing system itself is standing by or has suspended operation.

**Claim 53 (New)** A semiconductor manufacturing system according to Claim 51, wherein the controller is a temperature controller and a control program of the temperature controller is changed at a timing when the temperature in the reaction chamber is constant and the same as a standby state.

**Claim 54 (New)** A semiconductor manufacturing system according to Claim 51, wherein the controller is a mechanical controller and the control program of the mechanical controller and the control program of the mechanical controller is changed at a timing when a robot arm or an elevator is stopped.

**Claim 55 (New)** A semiconductor manufacturing system according to Claim 51, wherein the controller is a gas controller and the control program is changed at a timing when no gas is supplied to the reaction chamber.